

### **DETAILED ACTION**

1. All outstanding rejections, except for those maintained below are withdrawn in light of the amendment filed on **12/09/2008**.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

The new grounds of rejection set forth below are necessitated by applicant's amendment filed on **12/09/2008**. In particular, **Claim 1** has been amended to recite shaping a material in a dye by transferring a shape of the die, the inorganic silica compound being at least one of silica and laminar silicate, and the laminar silicate having an average length of 0.01 to 3  $\mu\text{m}$ . Additionally, the scope of the invention previously encompassed thermoplastic resins. The amended scope encompasses a thermoplastic resin composition containing a thermosetting resin. These limitations were not present in the claims at the time of the preceding Office Action. As the claims pending in this case depend from the limitations of this claim, the following action is properly made **FINAL**.

### ***Election/Restrictions***

2. Newly submitted claims **1-2, 4-5 and 10** are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

**Claims 1-2, 4-5 and 10** (Invention I), drawn to a process for a molded article which is shaped by molding, Classified in class 524, subclass 493, is patentably distinct

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from **Claims 6-7, 12-13 and 15-16** (Invention II), drawn to a substrate or film made from a thermosetting/thermoplastic resin composition, classified in class 428, subclass 336.

It is noted that claims 6-7, 12-13, and 15-16 are recited in product-by-process format. Pursuant to MPEP 806.05(f) where it is stated that "A product defined by the process by which it can be made is still a product claim (*In re Bridgeford*, 357 F.2d 679, 149 USPQ 55 (CCPA 1966)) and can be restricted from the process if the examiner can demonstrate that the product as claimed can be made by another materially different process" it is appropriate to group claim(s) 6-7, 12-13, and 15-16 as product claim(s).

The inventions are distinct, each from the other because:

Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make another and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the molded article can be made from a thermosetting/thermoplastic resin composition blended in a mixer rather than a die and then molded. The process for molding a molded article could also be practiced with a thermosetting resin not containing an inorganic compound, or containing an inorganic compound which is carbon black.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 1-2, 4-5 and 10 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

### **Double Patenting I**

3. **Claims 6-7, 12-13, and 15-16** are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over **Claims 27-28 of copending Application No. 10/433,956**. Although the conflicting claims are not identical, they are not patentably distinct from each other because these claims require a substrate or film comprising a molded article composed of a thermosetting resin and a silica or laminar silicate particle. These claims are recited in format, and as such, the process limitations do not carry patentable weight.

It is noted that **6-7, 12-13, and 15-16**, with respect to the process for the molded article, are stated in ***product-by-processes*** format.

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“[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985)

**The instant application** requires a substrate or film comprising the molded article obtained by the process for the molded article according to claim 1, 2 4, or 5 the thermoplastic material for the substrate comprises 100 parts by weight of a thermosetting resin and 0.1 to 100 parts by weight of an inorganic compound which can be silica having a particle diameter of 2  $\mu\text{m}$  or less, or laminar silicate having an average length of 0.01 to 3  $\mu\text{m}$  which retains its shape at temperatures above the glass transition point of the resin (material of Claim 1, 3), where the silica or laminar silicate is an inorganic compound containing silicon and oxygen. (Claim 4)

Copending application **No. 10/433,956** requires a material for insulating a substrate comprising 100 parts of epoxy resin, which is a thermosetting resin, and 0.1 to 50 parts by weight of a layered silicate. (See Claims 27-28) The material can also be a mixture of a thermoplastic resin and a thermosetting resin (see p. 4 line 11) which would have features of both types of resin. The claim requires that the interlaminar distances is 3 to 5 nm, and there are 5 or less layers. The specification indicates that this is found in a particle having an average length of 0.01 to 3 mm. (See copending specification, p. 19 line 30) The specification teaches that this resin for insulating a substrate would take the form of a molded insulating substrate or laminate or film. (see p. 35 line 7-17, 25) The specification also teaches a substantial set of thermosetting resins. (See copending application p. 6 – 19, instant application p. 30-39) Because a thermosetting

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resin does not soften when exposed to heat once set, a resin which maintains 75% of the shape after curing is expected to maintain 75% of the shape when heated. Note MPEP 804: "Further, those portions of the specification which provide support for the patent claims may also be examined and considered when addressing the issue of whether a claim in the application defines an obvious variation of an invention claimed in the patent. In re Vogel, 422 F.2d 438, 441-42, 164 USPQ 619, 622 (CCPA 1970)."

4. **Claims 6-7, 12-13, and 15-16** are directed to an invention not patentably distinct from **Claims 27-28** of commonly assigned **copending Application No. 10/433,956**. Specifically, see the discussion set forth above, in paragraph 3.

The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP Chapter 2300). Commonly assigned **copending Application No. 10/433,956**, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(e), (f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee can, under 35 U.S.C. 103(c) and 37 CFR 1.78(c), either show that the conflicting inventions were commonly owned at the time the invention in this application was made, or name the prior inventor of the conflicting subject matter.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon

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the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications pending on or after December 10, 2004.

Double Patenting II

5. **Claims 6-7, 12-13, and 15-16** are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over **Claims 1-2** of **copending Application No. 12/164,952**. Although the conflicting claims are not identical, they are not patentably distinct from each other because these claims require a substrate or film comprising a molded article composed of a thermosetting resin and a silica or laminar silicate particle.

Copending application **No. 12/164,952** requires a material for insulating a substrate comprising 100 parts of epoxy resin, which is a thermosetting resin, and 0.1 to 50 parts by weight of a layered silicate. (See Claims 1-2) The invention can also comprise a mixture of a thermoplastic and a thermosetting resin, (see p. 4 line 11) which would have features of both types of resin. The claim requires that the interlaminar distances is 3 to 5 nm, and there are 5 or less layers. The specification indicates that this is found in a particle having an average length of 0.01 to 3 mm. (See copending specification, p. 19 line 30) The specification also teaches a substantial set of thermosetting resins. (See copending application p. 6 – 19, instant application p. 30-39) Because a thermosetting resin does not soften when exposed to heat once set, a resin which maintains 75% of the shape after curing is expected to maintain 75% of the shape when heated. The specification teaches that this resin for insulating a substrate

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would take the form of a molded insulating substrate or laminate or film. (see p. 35 line 7-17, 25)

Double Patenting III

6. **Claims 6-7, 12-13, and 15-16** are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over **Claims 1-11 of copending Application No. 10/582,881**. Although the conflicting claims are not identical, they are not patentably distinct from each other because these claims require a substrate or film comprising a molded article composed of a thermosetting resin and a silica or laminar silicate particle.

Copending application **No. 10/582,881** requires a substrate or film for insulating a substrate comprising 100 parts of epoxy resin, which is a thermosetting resin, and 0.1 to 100 parts by weight of a layered silicate. (See Claim 1, 5-6, 8-11) The specification teaches that it is known to modify thermosetting materials with acrylic resin or the like. (See p. 2 par [0003]) Acrylic resin can be thermoplastic in nature, which would confer both thermosetting and thermoplastic behaviors to the composition. Additionally, the specification teaches a thermoplastic epoxy resin, (see p. 9 par [0022]) which is consistent with the claim language requiring a thermoplastic resin comprising a thermosetting resin. After curing, the substrate or film retains not less than 75% of the shape of the article molded before curing. The instant application requires that not less than 75% of the shape of the article molded before curing is maintained at temperatures above the glass transition temperature of the thermoplastic resin. Because a

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thermosetting resin does not soften when exposed to heat once set, a resin which maintains 75% of the shape after curing is expected to maintain 75% of the shape when heated.

### ***Information Disclosure Statement***

7. Applicant has resubmitted submitted documents on 12/09/2008 which appear to have been lost or not scanned by the USPTO when submitted with the IDS of 6/14/08, (supported by the stamped return postcard from the USPTO) and requests consideration of these documents. These documents have been scanned into the file wrapper and have been considered, as indicated on the annotated IDS attached with this office action, along with the documents submitted with the IDS filed 10/22/2008. The Chinese Office Action of August 22, 2008 was not considered because no translation was provided.

### ***Specification***

8. The amendment filed 12/09/2008 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

In paragraph [0055] applicant has amended the specification to replace “proper” with “optimized.” These terms embody very different concepts. In order to support



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these amendments, a certified translation of the foreign priority document or PCT document is required to show that this amendment is supported.

Applicant is required to cancel the new matter or demonstrate support in the reply to this Office Action.

### ***Claim Objections***

9. **Claims 6-7, 12-13, and 15-16** are objected to because of the following informalities:

**Claims 6-7, 12-13 and 15-16** recite “the process for the molded article.” This is unclear. What process does this refer to? The language should indicate what action the process proposes to take, such as using, disposing of, obtaining, molding, or the like.

**Claims 12 and 15** are objected to under 37 CFR 1.75 as being a substantial duplicate of **Claims 6 and 7**, respectively.

Claims 12 and 15 depend from Claim 4, which fails to further limit claims 1 or 2, (from which Claims 6 and 7 depend) because silica and laminar silicate inherently contain silicon and oxygen as constituent elements. Case law holds that a material and its properties are inseparable. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990) The subject matter of Claims 15 and 16, respectively, are therefore consistent with the subject matter of Claims 6 and 7, respectively. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to

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object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10. **Claims 6-7, 12-13, and 15-16** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Specifically, the instant application teaches a substantial set of thermoplastic resins (see par [0068]-[0091]), but does not teach or exemplify thermosetting resins. The word thermosetting appears in paragraph [0032], which appears to be a typographical error because the text refers to the above thermosetting resin composition, but a review of the above paragraphs contains an extensive discussion of the thermoplastic resin and its properties. (See par [0024]-[0031]) The word thermosetting also appears in paragraph [0099]. This discusses a thermoplastic resin of the invention used for forming an optical circuit by a method, as follows; a thermosetting acrylic resin is dissolved in a solvent, and applied to a substrate. The language is here is confusing, but it does not appear that this supports the amendments

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to the claims, as the amended claim language requires (a) the thermosetting resin in combination with a particle, and (b) a process for a molded article which is shaped by molding and a die, comprising the combination (a). Paragraph [0099] does not discuss either of these limitations in combination with the thermosetting resin.

11. **Claims 6-7, 12-13, and 15-16** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

There are many factors to be considered when determining whether there is sufficient evidence to support a determination that a disclosure does not satisfy the enablement requirement and whether any necessary experimentation is “undue.” These factors include, but are not limited to:

- (A) The breadth of the claims;
- (B) The nature of the invention;
- (C) The state of the prior art;
- (D) The level of one of ordinary skill;
- (E) The level of predictability in the art;
- (F) The amount of direction provided by the inventor;
- (G) The existence of working examples; and
- (H) The quantity of experimentation needed to make or use the invention based on the content of the disclosure.

*In re Wands*, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988)

Specifically, the claims require a thermoplastic resin comprising a thermosetting resin and an inorganic compound. This claim is generic to two different broad classes

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of resins recognized by those of ordinary skill in the art as largely opposite in behavior; thermoplastics are processed by heating to soften and they can be resoftened by heating after they have cooled, thermosets are heated to set (cure) the composition after which time the form is no longer readily adjustable with the application of heat. For a composition to have a thermoplastic characteristic, there must be some ingredient which would confer this characteristic. The claims have open language, which would allow for a thermoplastic component to be added to the composition along with the 100 parts by weight of thermosetting resin and an inorganic particle. Neither the claims nor the specification, however, elaborate on how this would be accomplished; no thermosetting resins or resin blends are taught. Additionally is no example in the specification which presents a composition which would have both a thermoplastic and a thermosetting component, or that has both characteristics. One of ordinary skill in the art would require significant experimentation because of the complete lack of enumeration of thermosetting resins, appropriate or otherwise, examples of compositions, or teachings as to how this composition would be generated or treated.

A conclusion of lack of enablement means that, based on the evidence regarding each of the above factors, the specification, at the time the application was filed, would not have taught one skilled in the art how to make and/or use the full scope of the claimed invention without undue experimentation. *In re Wright*, 999 F.2d 1557,1562, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993).

The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

12. **Claims 6-7, 12-13, and 15-16** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

**Claim 1**, from which each of these claims ultimately depends, recites a *thermoplastic* resin containing 100 parts by weight of a *thermosetting* resin, with inorganic compound dispersed in said *thermosetting* resin, and curing the material after shaping to obtain a molded article wherein the shape is maintained at temperatures above the glass transition point of said *thermoplastic* resin. A thermosetting and a thermoplastic resin are fundamentally different in behavior and properties. A thermosetting resin cures, and a thermoplastic resin cools to retain its shape. It is not understood how applicant would prepare a thermoplastic resin using a thermosetting resin. Furthermore, the claim indicates that 75% of the shape of the article molded before curing is maintained at temperatures above the glass transition point of said thermoplastic resin. Because a thermosetting resin does not soften when exposed to heat once set, a thermosetting resin is expected to maintain 75% of the shape when heated after being cured. This language is confusing.

**Claims 6-7, 12-13, and 15-16** ultimately depend from Claim 1, which recites the limitation "the glass transition point of said thermoplastic resin." Claim 1 recites a thermoplastic resin compositing, but not a thermoplastic resin component in the composition. It is not clear whether the glass transition point is intended to refer to an unrecited thermoplastic component in the composition which must be present to confer

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a thermoplastic characteristic, or whether this is intended to refer to the glass transition point of the thermoplastic resin composition.

**Claims 6 and 7** depend from Claim 2, which recites the limitation "the thermoplastic resin" in Claim 1. The claim requires that the *thermoplastic* resin is a crystalline *thermoplastic* resin. Claim 1 recites a thermoplastic resin composition, but not a thermoplastic resin component in this composition. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

13. **Claims 6-7, 12-13, and 15-16** are rejected under 35 U.S.C. 102(b) as being anticipated by **Yonezawa et al. (WO 02/046312)**

It is noted that the international Patent Application WO publication is being utilized for date purposes. However, since **WO 02/046312** is in Japanese, in the discussion below, the US equivalent **for WO 02/046312**, namely **US 2004/0053061**, respectively, is referred to in the body of the rejection below. All column and line citations are to the US equivalent.

It is noted that **6-7, 12-13, and 15-16**, with respect to the process for the molded article, are stated in ***product-by-processes*** format, and as such, the process limitations do not carry patentable weight.

"[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985)

**With regard to Claims 6 and 7**, Claim 1, from which these claims depend, requires a composition of 100 parts by weight of a thermoplastic resin composition comprising a thermosetting resin and 0.1 to 100 parts by weight of an inorganic compound with a diameter of 2  $\mu\text{m}$  or less, which will retain 75% of its shape during molding. Yonezawa teaches a material which is 100 parts by weight of a resin and 0.1 to 100 parts by weight of a layered silicate. (abs) Yonezawa teaches that the material comprises a thermosetting resin. (see par [0022]) Yonezawa later gives a highly detailed, highly extensive recitation of examples of the thermosetting resin. (see par [0042]-[0055]) ) Yonezawa further teaches that the invention can also comprise a mixture of a thermoplastic and a thermosetting resin, (see par [0011]) which would confer both thermosetting and thermoplastic properties to the composition, as required by applicant. Yonezawa additionally teaches that the layered silicate should have a preferable particle diameter of 0.05 to 2  $\mu\text{m}$ . (see par [0083]) In particular, this details that particle may have any shape, and the average length of the layered silicate is preferably 0.05 to 2  $\mu\text{m}$ , and the thickness is preferably 0.001 to 1  $\mu\text{m}$ , which would give an average size of under 2  $\mu\text{m}$ . In addition, the laminar silicates taught by Yonezawa are almost identical down to their treatment methods, (see par [0080]) to those taught by applicant, and the filler is important in maintaining structural integrity. (see par [0081]) The instant application requires that not less than 75% of the shape of the article molded before curing is maintained at temperatures above the glass transition temperature of the thermoplastic resin. Because a thermosetting resin does not soften

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upon exposure to heat after it has been cured or set, a composition containing a significant quantity of thermosetting resin would be expected to maintain its shape when exposed to high temperature. Yonezawa teaches that the material may be used in a variety of applications, including layered substrates, laminates, and several types of films. (See par [0134])

**With regard to Claims 12 and 15**, Claim 4, from which these claims depend, requires that the inorganic compound contains silicon and oxygen as constituent elements. Yonezawa teaches that layered silicates include smectite clay such as montmorillonite, saponite, hectorite, beidellite, and stevensite, as well as swelling mica. (see par [0080]) These are consistent with the silicas presented by applicant and these include oxygen and silicon as constituents.

**With regard to Claims 13 and 15**, Claim 5, from which these claims depend, requires a laminar silicate. Yonezawa teaches a layered silicate. (see par [0080])

14. **Claims 6-7, 12-13, and 15-16** are rejected under 35 U.S.C. 102(b) as being anticipated by **Shibayama et al. (JP 2003/313435)**

In setting forth this rejection, in the absence of a full English-Language translation of **JP 2003/313435**, a machine translation has been relied upon.

**With regard to Claims 6 and 7**, Claim 1, from which these claims depend, requires a composition of 100 parts by weight of a thermosetting resin and 0.1 to 100 parts by weight of an inorganic compound with a diameter of 2  $\mu\text{m}$  or less, which will retain 75% of its shape during molding. Shibayama teaches a 100 weight section



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thermosetting resin, and 0.1 to 100 weight section of sheet silicate. Sheet silicate is analogous to applicant's laminar silicate. (see par[0015]) Shibayama further teaches a thermosetting resin which is combined with thermoplastics is known. (See par [0002]) Shibayama also teaches thermoplastic and thermosetting resins, (see par [0015], [0016]) a combination which would confer both thermosetting and thermoplastic properties to the composition, as required by applicant. Shibayama teaches that the silicate should have a preferred average length of 0.01 to 2 micrometers (see par [0064]) Shibayama gives a highly detailed, highly extensive recitation of examples of thermosetting resins. (see par [0018]-[0047]) Further, Yonezawa discloses that the sheet silicates are preferably the same compounds, of the same shape and size, with the same treatments favored by applicant (see par [0064]-[0066], [0068]-[0082]) Because the filler is important in maintaining structural integrity, (see par [0066]) it is the examiners position that the properties with respect to structural stability would be similar. Furthermore, as thermosetting resins do not soften on heating, the structural stability of a substrate or film would be maintained on heating. Shibayama teaches that the material may be used in a variety of applications, including a laminate sheet, a layer of a multilayer substrate, and several types of films.(see par [0110]) This is consistent with forming a film, sheet, or layer, which is alternate terminology for the same structure.

**With regard to Claims 12 and 15,** Shibayama teaches that layered silicates include smectite clay such as montmorillonite, saponite, hectorite, beidellite, and stevensite, as well as swelling mica. (see par [0064]) These are consistent with the silicas presented by applicant and these include oxygen and silicon as constituents.

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**With regard to Claims 13 and 16**, Shibayama teaches a “sheet” silicate, which means mean a stratified silicate material. (see par [0064]) This is alternate terminology for a laminar or layered silicate.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. **Claims 6-7, 12-13, and 15-16** are rejected under 35 U.S.C. 103(a) as being obvious over **Yonezawa et al. (US 2004/0053061)**

The applied reference has common ***inventors*** with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention “by another”; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer

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in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2). Specifically, see the discussion set forth above, in **paragraph 3**.

### ***Response to Arguments***

16. Applicant's arguments filed **12/09/2008** have been fully considered. Specifically, applicant argues **(A)** the amendments to the specification have corrected the informalities and addressed the concerns raised in the prior office action, **(B)** Claims 6, 8, and 11-16 have been amended or cancelled to correct informalities noted in the previous office action, **(C)** the amendments to the claims overcome the outstanding rejection since the claims are now directed to a process for a molded article which is shaped by molding, with an important feature being the retention of the shape after molding, which is not taught by Li, Yonezawa, Fukatani, or Iwade.

**With respect to arguments (A)**, applicant's amendments have been considered and correct the informalities in the specification. Support for the amendment to paragraph [0070] is noted in the PCT/JP2004/018623 document submitted with the 371 application. On page 14, in paragraph [0070] the formula (1A) is found to be consistent with applicant's amendment. The objections are therefore withdrawn; however applicant is directed to the objections set forth above with regard to the revised specification.

**With respect to arguments (B)**, applicant's amendments have been considered. The objections with respect to the corrected informalities are withdrawn; however applicant is directed to the objections set forth above with regard to the revised claims.

**With respect to argument (E)**, applicant's arguments with respect to the anticipation rejections Claims 5-6 and 8-11 have been considered.

**With regard to the rejection over Li et al. (US 6,060,549)**, the rejection is withdrawn in light of applicant's amended scope. Li discloses only thermoplastic resins, and therefore the amended scope, which encompasses thermosetting resins is not anticipated by this disclosure.

**With regard to the rejection over Yonezawa et al. (WO 02/046312)**, applicant's argument is *not* persuasive. It is first noted that the claims at issue are written in product-by-process format, and as such the process limitations do not carry patentable weight. Never the less, Yonezawa appears to disclose the process limitations with respect to dispersing the inorganic compound in a thermosetting resin in a die by transferring a shape of the die. (See par [0135] in Yonezawa, and comparatively, see applicant's paragraph [0110]) It is noted that Claim 1 is written in somewhat convoluted language, so it is not immediately apparent whether the dispersed inorganic compound refers to the state of the material, or the action of the material traveling along the die. With regard to the change in shape following molding, Yonezawa teaches a material which exhibits excellent shape retention (see abstract). Yonezawa discloses an extensive group of thermosetting resins, (see par [0042]-[0055] of Yonezawa) as well as

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an invention comprising a mixture of a thermoplastic and a thermosetting resin, (see par [0011]) which would confer both thermosetting and thermoplastic properties to the composition. The layered silicate has an average length of 0.05 to 2  $\mu\text{m}$ , (see par [0080]) which falls within, and therefore anticipates applicant's claimed range. Based on the similar type of resin and similar filler, the examiner takes the position that the same properties would be realized by the material taught by Yonezawa and the material claimed by applicant. Case law holds that a material and its properties are inseparable. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990) See the rejection set forth in response to the modified claims, above, in **paragraph 13**.

**With regard to the rejection over Fukatani et al. (WO 01/036532)**, the rejection is withdrawn in light of applicant's amended scope. Fukatani discloses only polyolefin (thermoplastic) resins, and therefore the amended scope, which encompasses thermosetting resins is not anticipated by this disclosure.

**With regard to the rejection over Iwade et al. (WO 2002/016479)**, the rejection is withdrawn in light of applicant's amended scope. Iwade discloses only polyolefin (thermoplastic) resins, and therefore the amended scope, which encompasses thermosetting resins is not anticipated by this disclosure.

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Darcy D. LaClair whose telephone number is (571)270-5462. The examiner can normally be reached on Monday-Friday 8:30-6.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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